VISHNEVSKIY, F.M.; MARKUS, S.A.; SPIVAKOV, V.P.

Pumping out a flooded level in the Mirgalimsay mine. Gor. zhur. no.8:63-65 Ag '57. (MLRA 10:9)

1. Mirgalimsayskoye shakhtostroyupravleniye.
(Mirgalimsay--Mining engineering)
(Mine pumps)

L 06200-67 EWT(m)/EWP(j) IJP(c) WW/RM
ACC NR: AP6031748 SOURCE CODE: UR/0191/66/000/007/0023/0025

AUTHOR: Zhinkina, L. N.; Vishnevskiy, F. N.; Zhinkin, D. Ya.; Zubkov, I. A.

38
37
B

ORG: none

TITLE: Reaction of butyl orthotitanate with phenyl methylphosphonochloridate or phosphorus oxychloride

SOURCE: Plasticheskiye massy, no. 7, 1966, 23-25

TOPIC TAGS: butyl orthotitanate, phenyl methylphosphonochloridate, phosphorus oxychloride, polyorganophosphorustitanoxane, TITANATE, PHENYL COMPOUND, POLYMER STRUCTURE, CHEMICAL REACTION

ABSTRACT: A study has been made of the reaction of butyl orthotitanate (I) with phenyl methylphosphonochloridate (II) as with phosphorus oxychloride (III). At up to 90C, I and II taken in a 1/3 ratio react as follows:

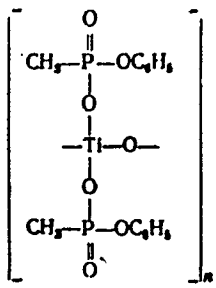
$$Ti(OC_4H_9)_4 + 3CH_3PO(OC_6H_5)Cl \longrightarrow$$
$$\longrightarrow Cl_3Ti(OC_4H_9) + 3CH_3PO(OC_6H_5)(OC_4H_9)$$

At above 100C the reaction products undergo condensation to form a polymer with a titanoxane backbone. The presumed structure of the

Card 1/2 UDC: 678.85+678.868.24

L 06200-67
ACC NR: AP6031748

polymer is:



A polymer with a high molecular weight is isolated by dissolving the reaction mixture in acetone and precipitating with water. I and III react in a similar manner; at higher reaction temperatures (170—180C) a cross-linked phosphorus-containing polyorganotitanoxane is formed. The polymer contains 1 titanium atom per phosphorus atom, and 1 butoxy group per 3 titanium atoms. The synthesized polymers withstand temperatures of 190—200C. Orig. art. has: 3 figures.

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 002

Card 2/2 afs

VISHNEVSKIY, F.N.

Manufacture of rubberized hair from the wastes of bristle and brush raw materials. Kozh.-obuv. prom. 6 no.12:25-26 D '64
(MIRA 18:2)

VISHNEVETSKIY, G.D., dots., kand. tekhn. nauk

Introduction to the technical theory of deformations caused by swelling and shrinkage of concrete. Sbor. nauch.trudov LISI no.26: 181-214 '57. (MIRA 12:1)

(Concrete--Testing)

VISHNEVSKIY, G.I.

Simple dye sprayers. Obm.tekh.opyt. [MLP] no.26:36-38 '56.
(MIRA 11:11)
(Dyes and dyeing--Leather)

VISHNEVSKIY, G.I.

Conveyors with continuous cleaning of screens. Obm.tekh.opyt. [MLP] no.26:42-44 '56. (MIRA 11:11)
(Conveying machinery)

VISHNEVSKIY, G.Ye.

Small-size test rod for controlling central heating systems. Vod. i san tekh. no.1:26-30 Ja '58. (MIRA 11:1)
(Hot-water heating--Regulators)

VISHNEVSKIY, G.Ye.; VISHNEVSKIY, I.Ye.

Electric sorption hygrometer. Vod.i san.tekh. no.7:16-20 Je '60. (MIRA 13:7)
(Hygrometry)

20490

S/191/61/000/003/015/015
B124/B203

15.8500

AUTHORS: Panshin, B. I., Vishnevskiy, G. Ye.

TITLE: Strength of glass Textolite in unilateral heating

PERIODICAL: Plasticheskiye massy, no. 3, 1961, 71-73

TEXT: The strength of the unilaterally heated plastic can be approximately calculated from the temperature gradient in the material cross section and from the diagrams "stress - deformation" for different temperatures; this procedure is, however, rather complicated and not always dependable. Inaccurate results are obtained, particularly when determining the strength of material heated on its surface to high temperatures, which is due to the fact that the same zones of the material in unilateral heating are subjected to thermal effects differing in intensity and duration. Therefore, the experimental determination of the strength of plastics used for unilateral heating to high temperatures is particularly important. Fig. 1 shows a diagram of the apparatus used. A flat 1.5-kw electric furnace, open on one side, with a 6-mm nichrome heating coil working at 18 v and 80 a, is used for heating. The tempera-

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Strength of glass Textolite...

ture of the heating element is automatically controlled with an ЭПД-01 (EPV-01) electron regulator. At 400, 600, and 800°C, the heat flows are 10,000, 32,000, and 80,000 kcal/m^2·hr, respectively. An ordinary small integral calorimeter of the radiation type is used to measure the heat flows (Ref. 5: Teploenergetika no. 12 (1958)). The mechanical properties of the plastic are determined either under a load varying with time (Fig.2) or under constant load. The authors examined glass Textolites of the types ФН (FN), СК-9Ф (SK-9F), and КАСТ-В (KAST-V) developed by B. A. Kiselev and Ya. D. Avrasin and co-workers. The greatest drop in strength corresponds to the unsteady period of heating. The binder of glass Textolites FN and SK-9F starts burning at a surface temperature of about 700°C. Since the material of the heated zone is separated into layers, it is necessary to examine, besides the tensile strength, also the bending and compressive strength in the plane of the foil. This is done with an apparatus shown in Fig. 4. Fig. 5 shows data of tensile and compressive strength of KAST-V glass Textolite, 2 mm thick, in the plane of the foil in three principal directions. There are 5 figures and 5 references: 4 Soviet-bloc.

Card 2/8

20490

S/191/61/000/003/015/015
B124/B203

Strength of glass Textolite.

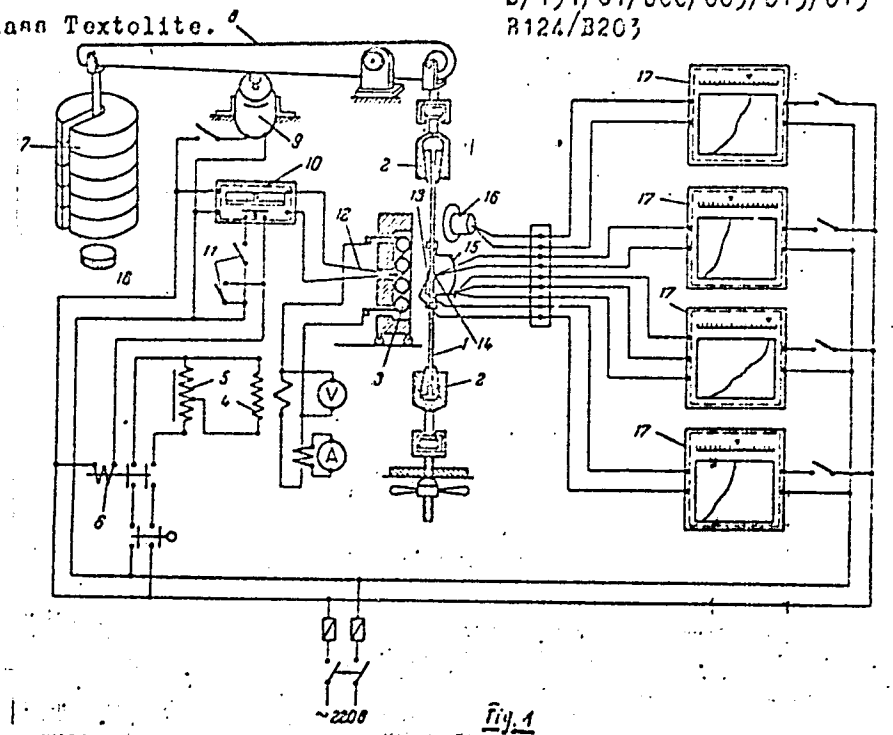

Fig. 1

Card 3/8

Legend to Fig. 1: Basic circuit diagram of the test device. (1) Specimen, (2) clamps, (3) electric furnace for unilateral radiation heating of specimens, (4) and (5) voltage regulators of the heater, (6) magnetic starter, (7) load, (8) lever of the loading device, (9) device for automatic loading, (10) automatic electronic regulator of the type EPV-01, (11) push buttons for nonautomatic switching-on of the heater, (12) thermocouple for measuring and regulating the heater temperature, (13) thermocouple at the heated specimen surface, (14) thermocouple at the unheated specimen surface, (15) deformation feeler, (16) heat flow meter, (17) electronic ЭПП-09 (EPP-09) potentiometers, (18) rubber buffers. Load, kg/mm^2; time, min.

Strength of glass Textolite...

Fig. 2. Dynamic conditions for the tensile test with unilateral heating of FN glass Textolite foil, 3 mm thick

Legend: (1) Temperature of the heater, (2) temperature of the heated surface, (3) temperature of the unheated surface, (4) tensile strength at 20°C, (5) breaking point in heating, (6) - (9) change in stress at constant velocity of clamps and loading of the specimen after 0, 1, 2, 3 minutes, (a) stress, (b) time, min, (c) temperature.

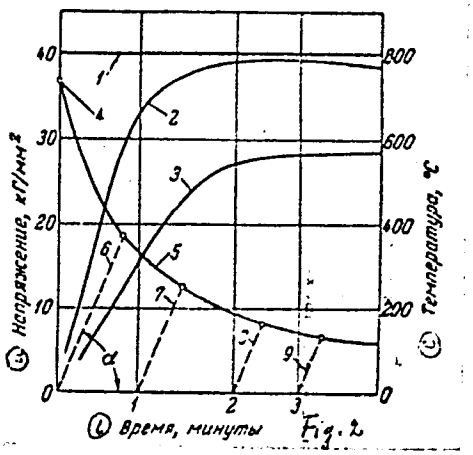

Fig. 2

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Strength of glass Textolite...

Fig. 4. Device for compressive tests of flat glass Textolite specimens with unilateral heating

Legend: (1) Specimen, (2) guide bar, (3) and (4) upper and lower clamp, (5) and (6) centering ball supports, (a) heating.

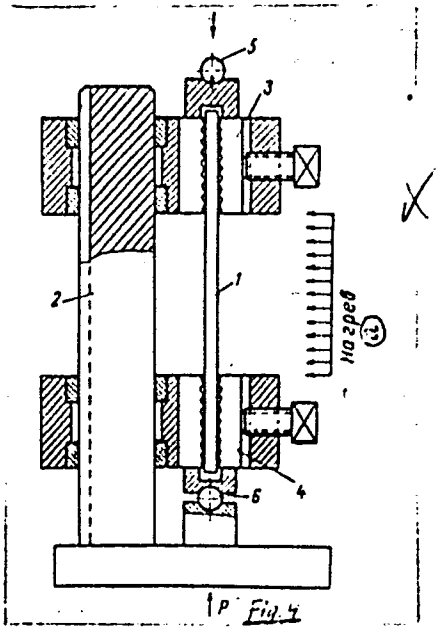

Fig. 4

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B124/B203

Strength of glass Textolite....

Fig. 5

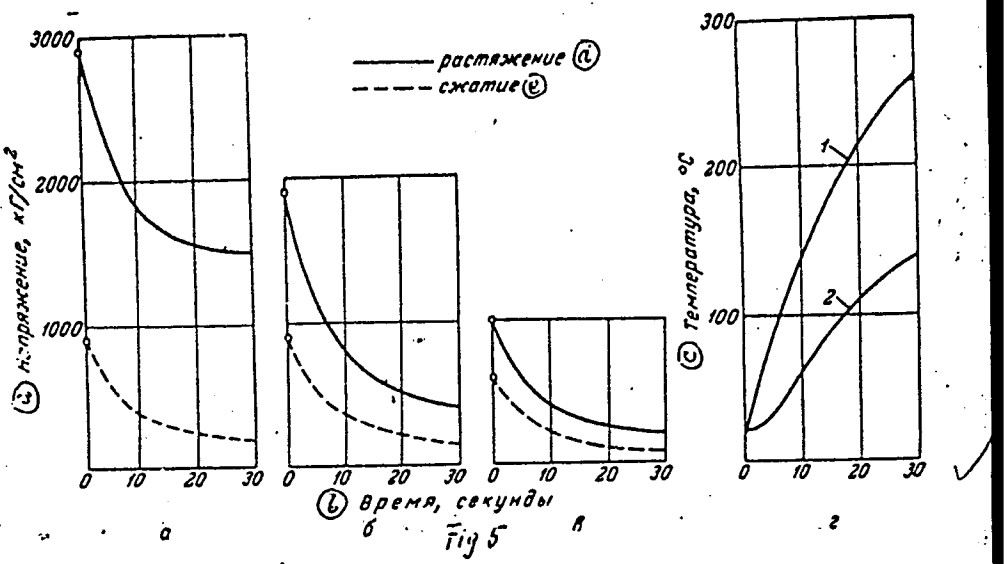

Fig 5

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Strength of glass Textolite...

S/191/61/000/003/015/015
B124/B203

Legend to Fig. 5: Tensile and compressive strength of KAST-V glass Textolite foil, 2 mm thick, with unilateral heating (heat flow 80,000 kcal/m^2·hr; temperature of the heater 800°C): (a) loading along the warp, (δ) loading along the filling, (β) loading at an angle of 45° to the warp, (ι) temperature conditions during the test, (1) and (2) temperature of the heated and unheated specimen surfaces. (a) Load, kg/cm^2, (b) time, seconds, (c) temperature, °C, (d) stretching, (e) compression.

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PANSHIN, P.I.; VISHNEVSKIY, G.Ye.

Determination of the deformability of glass textolite in stretch testing under conditions of unilateral heating. Plast.massy no.10: 55-58 '61. (MIRA 15:1)

(Glass reinforced plastics)

VISHNEVSKIY, G.Ye.; LOZINSKIY, M.G.

Life of the VFT-S and KAST-V glass textolite specimen under the conditions of one-sided heating. Plast.massy no.4:37-43 '64. (MIRA 17:4)

L 22975-66 EWP(e)/EWT(m)/EWP(j)/T/ETC(m)-6/EWA(l)/EWP(v) IJP(c) IG/WW/GS/RM/
ACC NR. AT6008655 (A) WH SOURCE: UR/0000/65/000/000/0113/0123

AUTHORS: Lozinskiy, M. G., (Moscow); Vishnevskiy, G. Ye. (Moscow); Pavlov, A. I. (Moscow)

55
54
B

ORG: none

TITLE: A study of the temperature and time dependence of the strength and durability of sheet glass plastics AG-4S and EF-S under tension, compression, and shear in conditions of programmed one-sided heating. 15

SOURCE: Vsesoyuznoye soveshchaniye po voprosam staticheskoy i dinamicheskoy prochnosti materialov i konstruktsionnykh elementov pri vysokikh i nizkikh temperaturakh. 3d. Termoprochnost' materialov i konstruktsionnykh elementov (Thermal strength of materials and construction elements); materialy soveshchaniya. Kiev, Naukova dumka, 1965, 113-123

TOPIC TAGS: glass plastic, glass product, synthetic material, thermal property, heat stability/ IMASH-11 material testing machine, AG-4S glass plastic, EF-S glass plastic 10

ABSTRACT: The authors describe the IMASH-11 28 machine which was designed and developed at the Moscow Institute of Machine Science (Institut mashinovedeniya) for the purpose of determining strength and deformation properties of sheet 15

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plastic specimens. The machine is designed for shear, tension, and compression testing in conditions of automatic programmed one-sided heating of specimens up to 1300K with a temperature increase rate of up to 50° per second in air and in an enclosed gas medium. A movable electric oven open on one side is used for maintaining the programmed temperature. Regulation of the specimen temperature is effected by automatically varying the distance between the oven and the specimen surface. The construction and the methods of conducting tests with the IMASh-11 machine are described by M. G. Lozinskiy and G. Ye. Vishnevskiy (Ustroystvo dlya izucheniya zakonomernostey deformatsii i razrusheniya obratsov, Byulleten' izobreteniy, 1963, No. 9). The authors describe the conduct and results of tests performed to measure the variation of the strength of sheet specimens of glass plastics AG-4S and EF-S with the level of initial constant stress. Strength and durability characteristics of the materials were measured in conditions of tension, compression, and shear. The IMASh-11 machine is shown in a schematic diagram, and a photograph shows the mounting of an RFK-1 camera used in recording shear deflections. Orig. art. has: 4 tables, 6 figures, and 1 photograph.

SUB CODE: 11/ SUBM DATE: 19Aug65/ ORIG REF: 007

VISHNEVETSKIY, Iosif Antonovich[Vyshnevets'kyi, I.A.], kand. ekon. nauk; DEMIDYUK, V.P., red.[Demydiuk, V.P.], red.; KOPYTKOVA, N.K., tekhn. red.

[The main economic tasks of the U.S.S.R.]Holovne ekonomichne zavdannia SRSR. Kyiv, Derzhpolitvydav URSR, 1962. 50 p. (MIRA 16:3)

(Russia--Economic policy)

VISHNEVSKIY, I.D. (Leningrad)

Uniform technology increases the mutual responsibility. Zhel. dor. transp. 47 no.9:88-89 S '65. (MIRA 18:9)

1. Nachal'nik otdela pod"yezdnykh putey Transportnogo upravleniya Leningradskogo soveta narodnogo khozyaystva.

VISHNEVSKIY, Isaak Davidovich; LAUT, Andrey Aleksandrovich; LEMESHCHUK, Petr Kondrat'yevich; CHERKES, Mikhail Yur'yevich; MALAKHOV, K.N., inzh., retsenzent; PREDE, V.Yu., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Industrial transportation sections and railroad stations]Transportnyi tsekh i stantsiia. Moskva, Transzheldorizdat, 1962. 58 p. (MIRA 15:11)
(Railroads, Industrial) (Railroads—Freight)

VLASOV, N.I.; ZIL'BERMAN, A.A.; POVERENNYY, I.D.; SAMOFAL, S.V., redaktor; VISHNEVSKIY, I.F., redaktor izdatel'stva; ANDREYEV, S.P., tekhnicheskiy redaktor

[Rapid capital repairing of blast furnaces] Skorostnoi kapital'nyi remont domennoi pechi. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1952. 99 p. (MLRA 9:8)
(Blast furnaces)

VLASOV, N.I.; ZIL'BERMAN, A.A.; POVERENNYY, I.D.; SAMOFAL, S.V., redaktor; VISHNEVSKIY, I.F., redaktor; ANDREYEV, S.P., tekhnicheskiy redaktor

[High-speed major repair work on blast furnaces] Skorostnoi kapital'-nyi remont domennoi pechi. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii. 1952. 99 p. [Microfilm]
(MLRA 7:9)

(Blast furnaces--Maintenance and repair)

VISHNEVSKIY, I.I.; SKRIPAK, V.N.

Scattering of phonons by cation vacancies in a spinel lattice.
Fiz. tver. tela 7 no.10:2925-2939 O '65. (MIRA 18:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov, Khar'kov.

[illegible], I.I., inzh.; [illegible], I.B., inzh.

High-strength bolts for [illegible]. Stroi. 42 no.7:36-38 Jl '64. (MIRA 18:8)

67713

18.8200
18.1240

SOV/126-7-3-9/44

AUTHORS: Geguzin, Ya. Ye. and Vishnevskiy, I. I.

TITLE: Investigation of Creep of Metals and Alloys. 5. (Issledovaniye kripa metallov i splavov. 5.) Early Stage of Creep in Plastically Deformed Filaments of Pb-Sn Alloy (Rannyaya stadiya kripa plasticheski deformirovannykh nitey splava Pb--Sn)

PERIODICAL: Fizika metallov i metallovedeniye, Vol 7, Nr 3, pp 367-371 (USSR)

ABSTRACT: The present work was carried out with the aim of accurately checking the interrelation between the kinetics of healing of distortions and the kinetics of the initial stage of creep in three substitutional solid solutions. The object for investigation was a solution of tin (25 at.%) and lead (75 at%). Such a concentration of tin is close to the limiting concentration of the α-solution at eutectic temperature, and hence it can be expected (Ref.2) that all effects associated with the influence of deformation on creep will be shown very clearly. The same method for making the specimens and carrying out measurements was used as by Geguzin et alia (Ref.2). Two series of experiments were carried out.

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Investigation of Creep of Metals and Alloys. 5. Early Stage of Creep in Plastically Deformed Filaments of Pb--Sn Alloy.

The experiments of the first series were carried out with the aim of finding the influence of the extent of initial distortion of the crystalline lattice of the solid solution on the kinetics of the early creep stage. The specimen was first plastically deformed. The experiments were carried out at a constant heating rate (Ref.3) ($\omega_H = 7^o$/min). As can be seen from Fig.1 the healing of a portion of the distortions taking place on heating causes creep to set in at higher temperatures and leads to smaller elongations of the specimen. The specimens were prepared as follows. Filaments of the alloy, obtained by drawing through a steel die of 0.3 mm diameter, were thoroughly annealed at 190°C for two hours, after which they were compressed to different degrees between polished steel plates. Measurements were carried out on specimens having the shape of strip of thicknesses: 0.18 mm (Δd = 0.12 mm); 0.13 mm (Δd = 0.17 mm) and 0.09 mm (Δd = 0.21 mm). The elongation was studied, both at constant heating rate $\omega_H = 5^o$/min (Fig.2) and

Investigation of Creep of Metals and Alloys. 5. Early Stage of Creep in Plastically Deformed Filaments of Pb--Sn Alloy.

in isothermal treatment at 180°C (Fig.3). All experiments were carried out at a specific load of R_{ud} = 6.2 kg/cm^2. In Fig:4 the time dependence of $\Delta L/L_o R_{ud}$ during continuous creep of the specimens with different initial crystal lattice distortion is shown. Experiments of the second series were carried out with the aim of studying the kinetics of creep of specimens having the same lattice distortion, loaded at different rates. The heating rate was varied within the limits 0.35 - 350°C/min. In Fig.5 the relationship $\Delta L/L_o R_{ud} = f(T)$ of equally deformed specimens on heating at a constant rate is shown. The phenomena determining the nature of the curves in Fig.5 can be conveniently discussed by considering the dependence of the effective yield strength of the investigated specimens on temperature at constant heating rate. This relationship was determined from curves shown in Fig.5 with the help of the relationship (Ref.3)

$$x = \omega \frac{d}{dT}\left(\frac{\Delta L}{L_o R_{ud}}\right)$$

4

Card 3/6

Investigation of Creep of Metals and Alloys. 5. Early Stage of Creep in Plastically Deformed Filaments of Pb--Sn Alloy.

The value of $\frac{d}{dt}\left(\frac{\Delta L}{L_o R_{ud}}\right)$ is found graphically by differentiating these curves. The dependence of x on T is expressed in the form of graphs $\ln x = \varphi(T)$ in Fig.6. As a result of the above investigations the authors have arrived at the following conclusions:-

(1) The kinetics of creep of a solid solution depends essentially on the degree of distortion of the crystal lattice of the specimen.

(2) The creep of a specimen with distorted lattice under isothermal experimental conditions is accompanied by healing of the distortions. In specimens with a given degree of initial lattice distortion the healing process is accomplished the later and the quasi equilibrium condition setting in is the further removed from equilibrium, the greater the initial deformation of the specimen.

4

Card 4/6

SOV/126-7-3-9/44

Investigation of Creep of Metals and Alloys. 5. Early Stage of Creep in Plastically Deformed Filaments of Pb--Sn Alloy.

(3) Experiments in which creep of specimens with a distorted crystal lattice, at various heating rates, was investigated have shown that the kinetics of distortion-removal from a solid solution is qualitatively analogous to the one observed earlier in distorted metallic powders (Ref.3, 4). The particular characteristic of this kinetics consists in the fact that the effective kinetic coefficient (in this case the effective coefficient of yield strength) is not a constant function of temperature. The non-constant nature of the dependence of the effective kinetic coefficient on temperature may be the result of the fact that the creep of an alloy is determined by essentially different mechanisms in various temperature ranges: by a dislocation mechanism at low temperatures and by a diffusion mechanism in a temperature range at which healing of dislocated regions is essentially accomplished.

There are 6 figures and 6 references, of which 4 are Soviet and 2 English.

Card 5/6

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67713
SOV/126-7-3-9/44

Investigation of Creep of Metals and Alloys. 5. Early Stage of Creep in Plastically Deformed Filaments of Pb--Sn Alloy.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kogo (Khark'ov State University imeni A. M. Gor'kiy)

SUBMITTED: June 19, 1957.

Card 6/6

VISHNEVSKIY, I.I.; SKRIPAK, V.N.

Temperature hysteresis of heat conduction in the breakdown of solid solutions. Dokl. AN SSSR 163 no.2:418-421 Jl '65. (MIRA 18:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov. Submitted December 19, 1964.

SUKHAREVSKIY, B. Ya.; VISHNEVSKIY, I. I.

Polymorphous transformation kinetics of ZrO_2. Dokl. AN SSSR 147 no.4:882-885 D '62. (MIRA 16:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov. Predstavleno akademikom N. V. Belovym.

(Zirconium oxide)

VISHNEVSKIY, I.I.; GAVRISH, A.M.; SUKHAREVSKIY, B.Ya.

Study of the stabilization and destabilization processes of the cubic modification ZrO_2. Rent. min. syr. no.2:3-4 '62. (MIRA 16:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.

VISHNEVSKIY, I.I.; SKRIPAK, V.N.

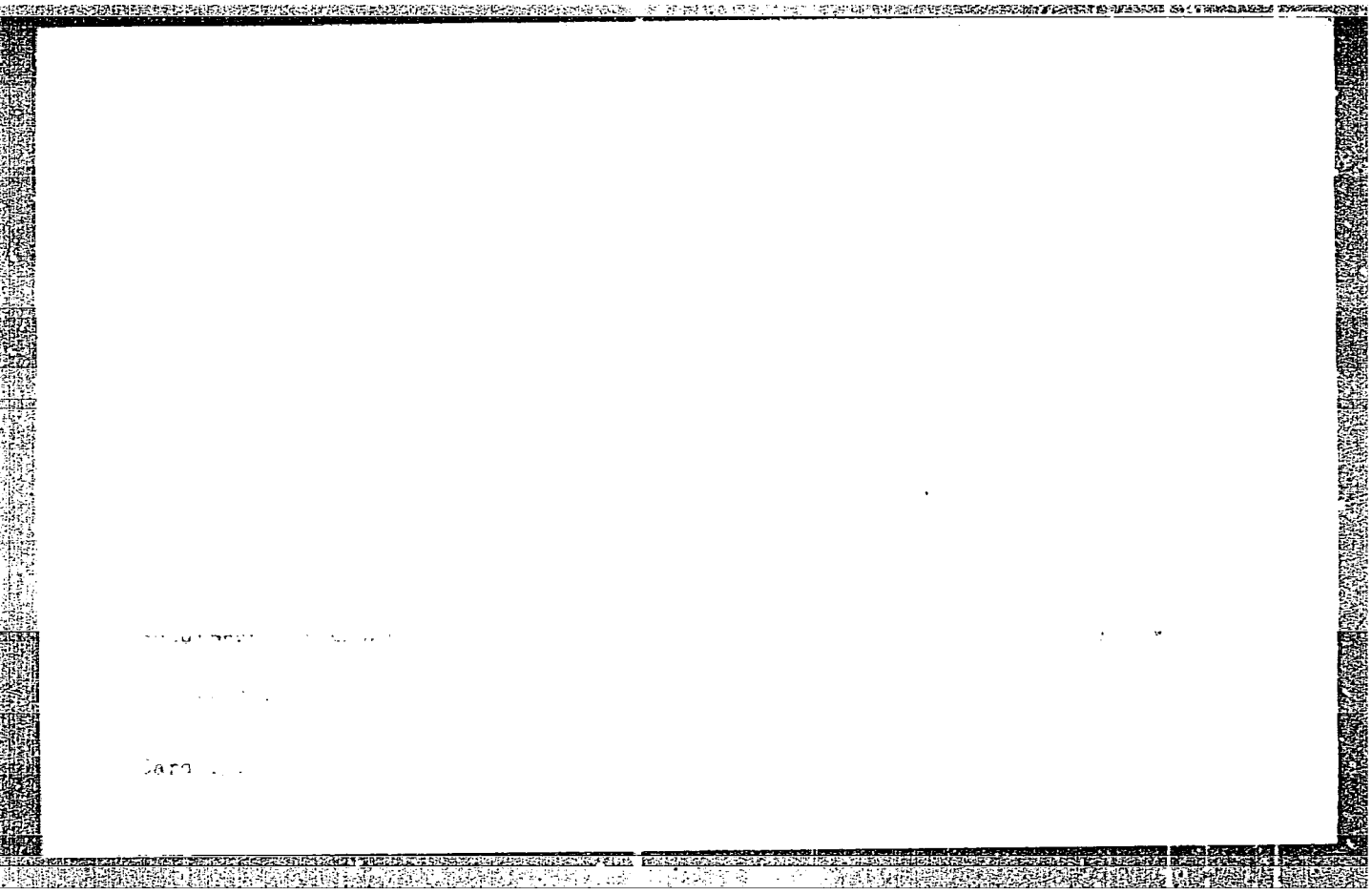
Heat conductivity of graphite-containing refractories.
Ogneupory 29 no. 5:227-231 '64. (MIRA 17:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.

FRENKEL', A.S.; VISHNEVSKIY, I.I.; SKRIPAK, V.N.

Temperature distribution in the crown masonry of an open-hearth furnace. Inzh. - fiz. zhur. 7 no.12:32-38 D '64
(MIRA 18:2)

1. Institut ogneuporov, Khar'kov.



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860030008-5"

VISHNEVSKIY, I.I.; SUKHAREVSKIY, B.Ya.

Role of cationic vacancies in the redox processes taking place in ionic crystals. Dokl. AN SSSR 160 no.3:642-645 Ja '65.
(MIRA 18:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.
Submitted July 6, 1964.

AUTHORS: Shakhtin, D.M., Vishnevskiy, I.I. 32-8-18/61

TITLE: Determination of the Thermal Conductivity of Fireproof Substances in the Vacuum. (Opredeleniye teploprovodnosti ogneuporov v vakuume)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol.23, Nr 8, pp. 927-929 (USSR)

ABSTRACT: The paper mentions as example the corresponding apparatus according to the method by Mc Quarrie (Am.Cera.Soc.) by which the thermal conductivity of fireproof pure oxides which are given the form of ellopsoids of revolution is determined in the vacuum. It is said that the use of such apparatuses is unsuitable for mass research work due to the complicated form which the samples must have. In this paper another apparatus is proposed (illustration given) in which the determination of the thermal conductivity of fireproof substances is carried out at high temperatures. The construction of this apparatus is based on the principle of a hollow cylinder with an absolute measurement of the stationary heat flow. Graphite and tantalum are suggested as materials for the performance of the research in the vacuum, in order to keep a high temperature in the experiments. Temperature of 1600-1700°C are suitable. (a description of the apparatus and its application is given). Aluminumoxide and zirconiumdioxide samples of various porosity are here used samples for experiments. The obtained linear relation yields the possibility to proceed up to maximum temperatures of the sample in measurements of thermal conductivity. It was found that samples with approximately the same porosity yield almost identical results. In-

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Determination of the Thermal Conductivity of Fireproof Substances in the Vacuum. 32-8-18/61

creased porosity reduces the thermal conductivity, but the character of the course of temperature of the thermal conductivity coefficient for a given material remains stable.
There are 3 illustrations.

ASSOCIATION: All-Union Scientific Research Institute for Fireproof Substances (Vsesoyuznyy nauchno-issledovatel'skiy institut ogneuporov)

AVAILABLE: Library of Congress.

Card 2/2

VISHENSKIY, I.I.

Accuracy in the weighing of charge materials. Izv. vys. ucheb. zav.; chern. met. 6 no.2:176-184 '63. (MIRA 16:3)

1. Krivorozhskiy gornorudnyy institut.
(Blast furnaces—Equipment and supplies)
(Feed mechanisms)

VISHNEVSKIY, I.I.; SUKHAREVSKIY, B.Ya.; GAVRISH, A.M.

Methods of quantitative phase analysis of ZrO_2 on the URS-501 diffractometer. Sbor.nauch.trud. UNIIO no.5:315-323 '61. (MIRA 15:12)

(Zirconium oxide—Analysis) (X rays—Diffraction)

VISHNEVSKIY, I.I.; LYULICHEV, A.N.; SUKHAREVSKIY, B.Ya.

Evolution of gases from refractory ceramics heated in vacuo.
Inz.-fiz. zhur. 4 no.12:94-97 D '61. (MIRA 14:11)

1. Institut ogneuporov, Khar'kov.
(Refractory materials)
(Vacuum apparatus)

ACCESSION NR: AP4038903 S/0131/64/000/005/0227/0231

AUTHORS: Vishnevskiy, I. I.; Skripak, V. N.

TITLE: Thermal conductivity of refractories containing graphite

SOURCE: Ogneupory*, no. 5, 1964, 227-231

TOPIC TAGS: refractory, graphite refractory, thermal conductivity, thermal electromotive force, grain orientation, platinorhodium thermocouple, transformer LATR 1, stabilizer SN 0.75, potentiometer P 306

ABSTRACT: An experimental device for testing thermal conductivity of graphite-containing refractories was constructed by the UNIIO (Ukrainian Scientific Research Institute of Refractories). Its design, based on the common cylindrical shell method, is shown in Fig. 1 on the Enclosures. Provisions are made for testing cyclindrical samples 55 mm in diameter and 180 mm long with a central opening 16 mm in diameter. A spiral heater consisting of EI-626 wire wound around a corundum tube was placed in the central opening, insulated by asbestos and light chamotte. Electric power was supplied by a transformer LATR-1 from the regulator SN-0.75. All measurements were taken at temperatures up to 1150C with platinum-rhodium thermo-

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couples placed as shown in Fig. 2 of the Enclosures. Thermal conductivity coefficients were determined at 100-degree intervals in the temperature range 700-1100C and were calculated according to the formula:

$$\lambda = \frac{Q \ln \frac{r_2}{r_1}}{2\pi l \Delta t},$$

where: Q - radial stream of heat generated per unit of time by a heater section with the length l, Δt - temperature difference between the points r_1 and r_2. Maximum theoretical error varied from 6-8%. Thermoelectromotive force was measured (accuracy to 0.001 mv) with a P-306 potentiometer and a mirror galvanometer (10^{-7} v/mm). The results showed that thermal coefficients of graphite were different in the directions parallel and perpendicular to the direction of material pressing. This was explained by the grain orientation originating in the process of pressing. To increase the thermal conductivity of a graphite-containing refractory lining the thermal flux should progress perpendicular to the direction of pressing. This would produce an approximate 40% increase in the conductivity. If the thermal flux must proceed parallel to the pressing direction, an attempt

ACCESSION NR: AP4038903

should be made to obtain a fine texture of refractory material during its production and thus to increase its $\lambda_{||}$. The experimental specimens were presented, and some of their indexes were determined by I. P. Safronova. Orig. art. has: 2 tables, 5 figures, and 1 formula.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (Ukrainian Scientific Research Institute of Refractories)

SUBMITTED: 00 DATE ACQ: 05Jun64 ENCL: 02

SUB CODE: MM NO REF SOV: 009 OTHER: 002

Card 3/5

ENCLOSURE: 01

ACCESSION NR: AP4038903

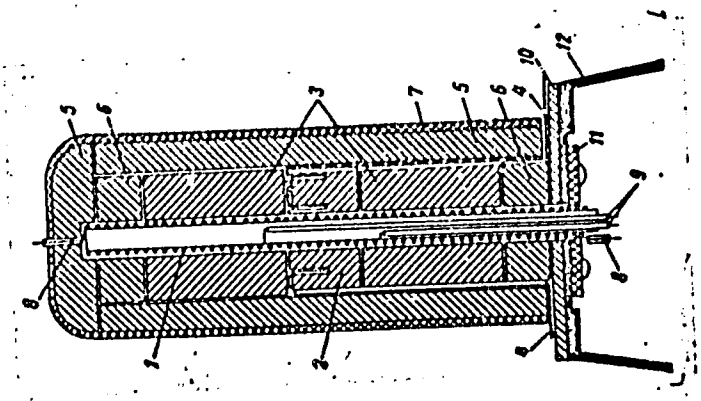

Fig. 1. Device for measuring thermal conductivity coefficient:
1- heater; 2- sample; 3- prop and extension pieces; 4- thermocouple terminals; 5- thermal insulation; 6- rings of ultralight material; 7- asbestos; 8- heater points; 9- potentiometer outlets; 10- asbestos-cement lining; 11- clamp; 12- metal base.

Card 4/5

ENCLOSURE: 02

ACCESSION NR: AP4038903

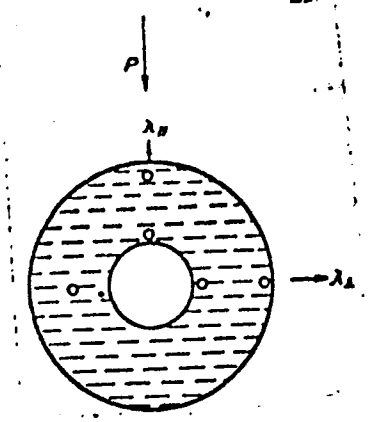

Fig. 2. Section of a sample and the distribution of openings for thermocouple for the determination of $\lambda_{\perp}$ and $\lambda_{\parallel}$.

P - direction of stress in pressing; dotted lines show particle orientation in the sample.

Card 5/5

VISHENSKIY, I.I.

Theoretical study of the operation of the weighing mechanism of scale cars. Gor.nauch.trud. KGRI no. 21:186-195 '63. (MIRA 17:7)

VISHNEVSKIY, I.I.; DZYUBENKO, M.I.

Measurement of the thermal conductivity and thermal diffusivity coefficients of refractories using the nonsteady-state method. Inzh.-fiz. zhur. no.10:45-48 O '64. (MIRA 17:11)

1. Institut ogneuporov, Khar'kov.

ACCESSION NR: AP4041724 S/0181/64/006/007/2168/2174

AUTHORS: Vishnevskiy, I. I.; Sukharevskiy, B. Ya.

TITLE: Influence of point defects on the thermal conductivity of substitutional solid solutions with cation vacancies

SOURCE: Fizika tverdogo tela, v. 6, no. 7, 1964, 2168-2174

TOPIC TAGS: crystal imperfection, thermal conductivity, solid solution, magnesium oxide, phonon

ABSTRACT: To check on the contribution of vacancies to the scattering of phonons by point defects of the crystal lattice, the authors studied the variation of the thermal conductivity of magnesium oxide in which the Mg^{2+} were replaced by Fe^{2+} and Fe^{3+} ions and by cation vacancies through interaction between MgO and $(Mg, Fe^{2+})Fe_2^{3+}O_4$. The specimen preparation and the test procedure are briefly described. The measurements were made at 300--800K and at a concentration of the

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ACCESSION NR: AP4041724

substitutes for the Mg^{2+} ions 0--22 at. %. The results have shown that the presence of cation vacancies leads to a stronger dependence of the thermal resistivity on the concentration than for substitution of cations having the same charge. The results are explained by taking account of the role of the vacancies in the expression for the diameter of scattering of phonons by point defects. The corrected expression describes the thermal resistivity of solid solutions with cation vacancies more correctly than the empirical formula derived by Aliyev and Dzhangirov (FTT v. 5, 3338, 1963). Orig. art. has: 4 figures and 18 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy institut ogneuporov, Khar'kov (Scientific-Research Institute of Refractories)

SUBMITTED: 28Dec63 ENCL: 02

SUB CODE: SS NR REF SOV: 010 OTHER: 008

Card 2/4

S/020/62/147/004/024/027
B101/B186

AUTHORS: Sukharevskiy, B. Ya., Vishnevskiy, I.I.

TITLE: Kinetics of polymorphic conversion of ZrO_2

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 4, 1962, 882-885

TEXT: Based on the research published in Western papers (F.A. Mumpton, R. Roy, J.Am.Ceram.Soc., 43, 5, 234 (1960); P. Murray, E.B. Allison, Trans. Brit. Ceram. Soc., 53, 6, 335 (1954); C.T. Lynch, F.W. Vahidiek, L.B. Robinson, J.Amer. Ceram. Soc., 44, 3, 147 (1961)) the transition of monoclinic α-ZrO_2 into tetragonal β-ZrO_2 is discussed, and attempts were made to explain the kinetics of this conversion. A УРС-50И (URS-50I) X-ray diffractometer was connected with a heater in such a way as to allow X-ray analyses of cylindrical samples at 1550°C. Preliminary experiments showed the α-β-transition to set in at 1145°C. Hence, the change in X-ray pattern at a constant temperature of 1155°C was studied, and the content of α- and β-modification in the sample was determined from the intensity of lines. The temperature interval of the

Card 1/3

Kinetics of polymorphic ...

α-β-transition was found to depend on the preliminary heat treatment of the sample. In the first isothermal experiment, the α-β-transition was completed within 35 min. When repeating the experimental cycle with the same sample, complete conversion could not be reached, even after 3 hrs. Finally, a state of saturation characterized by a certain amount μ (T) of inconvertible monoclinic modification was reached. The equation $(C_t - C_\infty)/(C_o - C_\infty) = e^{-qt}$, where $C_\infty = \mu(T)/M_\alpha^o + M_\beta^o)$, the percentage of monoclinic modification on infinite isothermal heating, is written down for the concentration. Its correctness is proved by the experimental values forming a straight line in the coordinate system $\log(C_t - C_\infty)$ versus t. In the first experiment, C_∞ was found to be 1.5%, in the second one 15%, and in the third one 20%. The assumption that the temperature interval in the α-β-transition of ZrO_2 is due to an internal stress caused by a change in grain size, is consistent with the hypothesis of E.B. Allison and I. Taylor (Trans. Brit. Ceram. Soc., 54, 11, 677 (1955)). Microscopic examinations showed the grains to grow up to ten times their initial size of 0.1 μ when subjected to the first heating

Card 2/3

test. Correspondingly, the distinctness of the 221 line of the α-modification increased when the experiments were repeated. There are 4 figures and 1 table.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (Ukrainian Scientific Research Institute of Refractory Materials)

PRESENTED: July 11, 1962, by N.V. Belov, Academician

SUBMITTED: June 7, 1962

Card 3/3

SUKHAREVSKIY, B.Ya.; VISHNEVSKIY, I.I.; GAVRISH, A.M.

Disintegration of solid solutions in the ZrO - CaO system. Dokl. AN SSSR 140 no.4:884-887 O '61. (MIRA 14:9)

1. Predstavleno akademikom N.V.Belovym.
(Zirconium oxide) (Calcium oxide) (Solutions, Solid)

KOVALEV, A.I.; VISHNEVSKIY, I.I.

Dynamic method of determining the elastic moduli of refractory materials at high temperatures. Zav.lab. 25 no.9:1109-1111 '59. (MIRA 13:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.
(Refractory materials--Testing)
(Elasticity)

S/893/61/000/005/004/005
B117/B186

AUTHORS: Vishnevskiy, I. I., Sukharevskiy, B. Ya., Gavrish, A. M.

TITLE: Method of quantitative phase analysis applied to ZrO_2 using the diffractometer of type УРС-50 И (URS-50I)

SOURCE: Kharkov. Ukrayins'kyi naukovodoslidchyi instytut vohnetryviv. Sbornik nauchnykh trudov, no. 5(52), 1961, 315-323

TEXT: A special method of quantitative phase analysis of ZrO_2 was developed using the diffractometer, type УРС-50 И (URS-50I) which eliminates the background in x-ray pictures. The annular shape of the standard specimen makes it possible to keep the illumination of the test specimen permanently constant, even if the cross section of the primary beam is inhomogeneous. The percentage content of monoclinic and cubic phases is determined with the aid of a calibrating curve $c_x = f(I_x/I_{stand})$. It has been shown that, irrespectively of the lattice distortion of the specimen

Card 1/2

Method of quantitative phase ...

and its grain size ($< 60\mu$), the amount of the monoclinic modification can be determined from calibration curves for a specimen burnt at 800°C with a grain size of $< 60\mu$. Separate calibration curves have to be constructed for determining the cubic modification according to the stabilizing addition used. To determine the phase composition of ZrO_2 it is, therefore, easier to use the diagram for the monoclinic modification. In the determination of the concentration by the method suggested, the absolute error is 1.2-5%. There are 5 figures and 2 tables.

Card 2/2

29997
S/170/61/004/012/007/011
B104/B138

15.2620

AUTHORS: Vishnevskiy, I. I., Lyulichev, A. N., Sukharevskiy, B. Ya.

TITLE: Liberation of gases from vacuum-heated refractory ceramics

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 12, 1961, 94 - 97

TEXT: The authors tested the corundum K_1 and K_2 (K_1 and K_2), aluminous ВГ and ВЛ (VG and VL), and aluminosilicate refractories AL_1 and AL_2 (AL_1 and AL_2). The amount of gas liberated was estimated from pressure variations in the experimental apparatus, which was evacuated prior to the experiment. The pressure variations were measured with ЛМ-2 (LM-2) and ЛТ-2 (LT-2) pressure gauges and with a ВИТ-1 (VIT-1) vacuum gauge. The test chamber was a steel tube 50 mm in diameter and 1500 mm long (capacity about 3 liters). Eight cylindrical specimens 36 mm in diameter and 50 mm long were placed in the center of the heating zone. To eliminate impurities, the specimens were previously annealed in air at 1000°C for one hour. Before starting the tests the chamber with specimens in it, was evacuated to about $5 \cdot 10^{-5}$ mm Hg. The specimens were heated to 900°C at a

Card 1/2

Liberation of gases from vacuum-heated ...

rate of 6°/min. As can be seen from Fig. 1, gas liberation peaks appear at 300-400°C and 700-800°C. It is shown that the first maximum is related to desorption of gases, and the second to reduction of oxides. Finally, the quality of the various refractories is estimated from the amount of gases liberated. The specimens were supplied by A. I. Royzen. There are 2 figures, 2 tables, and 3 references: 2 Soviet and 1 non-Soviet.

ASSOCIATION: Institut ogneuporov, g. Khar'kov (Institute of Refractory Materials, Khar'kov)

SUBMITTED: February 10, 1961

Fig. 1. Temperature (or time) dependence of infiltration (Δp, μ/min). Legend to Fig. 1a: (1) K_1; (2) K_2; (3) ВГ (VG); (4) ВЛ (VL); (5) $АЛ_1$ (AL_1); (6) $АЛ_2$ (AL_2); (7) idle run system (without specimens).

Legend to Fig. 1b: (1) first test; (2) after 2-hours in air; (3) after 50 hr; (4) after 250 hr in air 1 roasting at 1000°C; (5) idle run.

S/081/62/000/011/032/057
E202/E192

AUTHORS: Vishnevskiy, I.I., Sukharevskiy, B.Ya., and Gavrish, A.M.

TITLE: Method of quantitative phase analysis of ZrO_2 using diffractometer УРС-50И (URS-50 I).

PERIODICAL: Referativnyy zhurnal, Khimiya, no.11, 1962, 403, abstract 11 K 189. (Sb. nauchn. tr. Ukr. n.-i. in-t ogneuporov, no.5(52), 1961, 315-323).

TEXT: A method of quantitative phase analysis using URS-50 I is developed. A characteristic feature of the method is the use of a ring-shaped sample and the method of calculation which permits elimination of errors arising from the determination of the background scattering of the X-ray photograph. It was found that the preliminary annealing at 800 °C makes it possible to determine the amounts of the monoclinic modification independent of the magnitude of lattice distortion present before annealing, and the grain size ($\leq$ 60 μ). The error in the determination of the concentration in the chosen method depends on the content of the phase and is of the order of 1.5-5% absolute.

Card 1/1 [Abstractor's note: Complete translation.]

28(5)
AUTHORS: Kovalev, A. I., Vishnevskiy, I. I. SOV/32-25-9-32/53

TITLE: Determination of the Modulus of Elasticity of Refractory Products at High Temperatures by the Dynamic Method

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 9, pp 1109 - 1111 (USSR)

ABSTRACT: A method was worked out for high-temperature measurements of the dynamic modulus of elasticity of refractories, allowing to determine the normal modulus of elasticity E and the shear modulus G simultaneously at any given temperature. This method has already been used by A. I. Kovalev (Ref 1) for measurements on metals. The sample is a parallelepipedon (30×30×230 mm) that is smaller in the center (16×16 mm and 80 mm long). That part of the sample that was turned down to a smaller diameter serves to localize the deformation and the zone of heating. When the sample is fastened to a bracket of the apparatus (Fig 1), it is possible to cause flexural vibrations or torsional vibrations through magnet coils, the resonance frequency of these vibrations being measured. During the test the sample is heated by means of an electric furnace (with

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wire coiling of EI626 alloy). The vibrations of the generator are transferred to a PS-64 scaler unit and the number of pulses per unit of time is determined. The equations are based on the assumption that the vibrations of the sample lead only to a deformation of the turned down part of the sample. Equations are given for E and G, according to which these quantities can be calculated with an absolute error of 14 to 16%. Among other things it was established that with Dinas-clay samples reliable results can be obtained, if the turned down part of the sample possesses moment of inertia of less than 0.5 cm^4. During high-temperature tests dimensional changes of the sample due to thermal effects are to be taken into account; the correction to be made for isotropic materials can be calculated according to an equation. The reproducibility of the results of measurement was checked on magnesite samples, wherefrom a maximum difference of $\pm$ 1% resulted. Diagrams of the temperature dependence of E and G in commercial refractories of magnesite, fire clay, and Dinas clay are shown (Fig 2). There are 2 figures and

Determination of the Modulus of Elasticity of Refractory Products at High Temperatures by the Dynamic Method SOV/32-25-9-32/53

1 Soviet reference.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (Ukrainian Scientific Research Institute for Refractory Products)

Card 3/3

VISHNEVSKIY, I.I.; SUKHARSVSKIY, B.Ya.

Effect of point defects on the heat conductivity of substitutional solid solutions with cation vacancies. Fiz. tver. tela 5 no.1:226-227 Ja '63. (MIRA 17:10)

1. Nauchno-issledovatel'skiy institut ogneuporov, Khar'kov.

VISHNEVSKIY, I.I.; FRENKEL', A.S.; SKRIPAK, V.N.

Heat conductivity of chrome spinelide. Fiz. tver tela 5 no.9: 2691-2697 S '63. (MIRA 16:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov, Khar'kov.

SHAKHTIN, D.M.; VISHNEVSKIY, I.I.

Determination of the heat conductivity of refractories in a vacuum.
Zav. lab. 23 no.8:927-929 '57. (MLRA 10:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ogneuporov.
(Refractory materials--Testing)
(Heat--Conduction)

VISHNEVSKIY, I.I.; ZUBAKIN, A.T.; MYAND, Kh.P.; LEYKIN, B.P., redaktor; [illegible], Ye.K., redaktor izdatel'stva; MEL'NICHENKO, F.P., tekhnicheskiy redaktor

[Planning work and wages in construction brigades; practices of Estonian builders] Planirovanie truda i zarabotnoy platy v stroitel'nykh brigadakh; iz opyta stroek Estonskoi SSR. Moskva, Gos.izd-vo lit-ry po stroit. i arkhit., 1957. 57 p. (MIRA 10:9)
(Wages) (Estonia--Construction industry)

L 26641-66 EWT(1)/T IJP(c)

ACC NR: AP5025366 SOURCE CODE: UR/0181/65/007/010/2925/2929

AUTHOR: Vishnevskiy, I. I.; Skripak, V. N.

ORG: Ukraine Scientific Research Institute of Refractory Materials, Khar'kov (Ukrainskiy nauchno-issledovatel'skiy institut ogneyporov)

TITLE: Scattering of phonons by cation vacancies in a spinel lattice

SOURCE: Fizika tverdogo tela, v. 7, no. 10, 1965, 2925-2929

TOPIC TAGS: phonon, cation, crystal lattice, phonon scattering

ABSTRACT: The special role of vacancies in processes of thermal wave scattering is caused by very large distortions as compared to additions of a substitute. Characteristics of the concentration dependence of heat conductivity in solid solutions of a substitute-subtraction with spinel structure, containing a large quantity of cation vacancies were investigated. Measurements confirmed the hypothesis on the effect of vacancies on phonon spectrum of the lattice, as a result of which the concentration dependence of thermal resistance should be expressed by an alternating polynomial of the 4th degree. Solutions of

Card 1/2

L 26641-66

ACC NR: AP5025366

$MgAl_2O_4$-Al_2O_3 were used. Orig. art. has: 3 figs. 5 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 01Apr65/ ORIG REF: 003/ OTH REF: 010

Card 2/2

L 05431-67 EWT(1), WW

ACC NR: AP6024507 SOURCE CODE: UR/0181/66/008/007/2262/2264

AUTHOR: Vishnevskiy, I. I.; Skripak, V. N.

ORG: Ukrainian Scientific-Research Institute of Refractory Materials (Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov)

TITLE: Thermal conductivity of spinel-ferrites in the interval 300 - 1000K

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2262-2264

TOPIC TAGS: ferrite, thermal conduction, temperature dependence, Curie point, second order phase transition, specific heat

ABSTRACT: In view of discrepancies in the published reports on the absolute values and temperature dependence of the thermal conductivity of ferrites with spinel structure, the authors investigated the temperature dependence of the thermal conductivity of the ferrites $MgFe_2O_4$, $NiFe_2O_3$, $Li_{0.5}Fe_{2.5}O_4$, $ZnFe_2O_4$, and $Ni_xZn_{1-x}Fe_2O_4$ ($x = 0.4$, 0.5, 0.7), synthesized by a standard ceramic technique and treated thermochemically to obtain maximum oxidation. The measurements were made in a nitrogen atmosphere by a planar stationary method, using an installation similar to that described by Ye. D. Devyatkova et al. (FTT v. 2, 738, 1960). The temperature dependence of the thermal conductivity was found to be linear in all cases, in accord with Euken's law, with a slight jump occurring at the Curie temperature, attributed to the jump of the specific heat at the second-order phase transition point. The changes in specific heat and in the thermal conductivity at the point of magnetic transformation were determined for

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L 05633-67

ACC NR: AP6024507

all but the mixed ferrites. Deviations from data by others are attributed to the presence of a large number of impurity ions or to partial reduction of the ferrites. The authors thank Ye. I. Aksel'rod for making the magnetic measurements. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 09Dec65/ ORIG REF: 010/ OTH REF: 007

Card 2/2 egr

YEGOROV, I.Ye.; VISHNEVETSKIY, I.M.

The elevator system and its needs. Gor. khoz. Mosk. 37 no.11: 19-23 N '63. (MIRA 17:1)

1. Upravlyayushchiy trestom "Liftremont" Moskovskogo gorodskogo zhilishchnogo upravleniya (for Yegorov). 2. Glavnyy inzhener tresta "Liftremont" Moskovskogo (for Vishnevetskiy).

VISHNEVSKIY, I.M.; SLOBOZHANKIN, A.D.

Tuberculosis of the stomach. Khirurgiia 35 no.12:97-98 D '59.
(MIRA 13:6)
(TUBERCULOSIS GASTROINTESTINAL case reports)

VISHNEVSKIY, I. P.

Foresters

Foresters of the "Oktiabr" Forest Conservation Station. Les i step' 5 No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

VISHNEVSKIY, I. V.

15(0) SOV/131-59-1-9/12

AUTHORS: Karklit, A. K., Potemkin, P. S.

TITLE: Conference of Young Specialists (Konferentsiya molodykh spetsialistov)

PERIODICAL: Ogneupory, 1959, Nr 1, pp 47-47 (USSR)

ABSTRACT: This conference of young specialists of the Vsesoyuznyy institut ogneuporov (All Union Institute of Refractories) was held in Leningrad on November 13-14, 1958, with the participation of representatives of the youth workers and the Ukrainskiy institut ogneuporov (Ukrainian Institute of Refractories). The conference should represent a show of young engineers and technicians. N. P. Gordeyev, head of the Institute, outlined in his opening speech the work of young specialists of various special branches, designating it as successful. Further, the following reports are mentioned: V. G. Yeger spoke about manufacturing methods of superstable pastilles made of boric siliceous rocks (borovichskaya "kremnevka").
N. V. Meshalkina reported on test results of the properties of magnesium solutions on liquid glass.
I. V. Vishnevskiy (CNIIO) reported on the dynamic method of determination of the modulus of elasticity at temperatures up to 1300-1400°.
G. G. Mel'nikova spoke about the examination of the changes of phase composition of worn-out refractory magnesite-chromite products.
N. V. Semkina reported on elaboration results of spectroscopic methods for the alumina content in types of clay.
V. G. Sloushch stated the causes of bar fracture of the press CM-143 by means of tensometration.
G. A. Koba used a tensometric transmitter for the automatic control of mold charging on the press SM-143.
V. N. Lebedev reported on the working out of the design for a new furnace cart.
V. Z. Shron reported on sample taking devices of a new system.
A. N. Levin reported on the design of water supply and canalization.
N. Z. Perel'son dealt with questions of air dust collection.
N. M. Perel'muter, Ye. A. Greshneva and others submitted a new variant for the foundation of a tunnel kiln.
A. Z. Verdel' reported on the beginning of operation and installation of a rotary furnace at the Borovichskiy kombinat. As a principal default it was stated that part of the young specialists are still insufficiently familiar with the production. The measures provided for by the Party and Government to reform the universities and to strengthen their relations to works in operation shall improve the training of specialists.

Card 1/3

Card 2/3

ASSOCIATION: Vsesoyuznyy institut ogneuporov (All-Union Institute of Refractories)

Card 3/3

VISHNEVSKIY, I.V.

Vishnevskiy, I.V. "The anatomic properties of the temporal and subtemporal depressions", Trudy Voyen.-mor. med. akad., Vol.,XI, 1948, p. 284-301, -Bibliog: 21 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

VISHNEVSKIY, G.Ye.; VISHNEVSKIY, I.Ye.

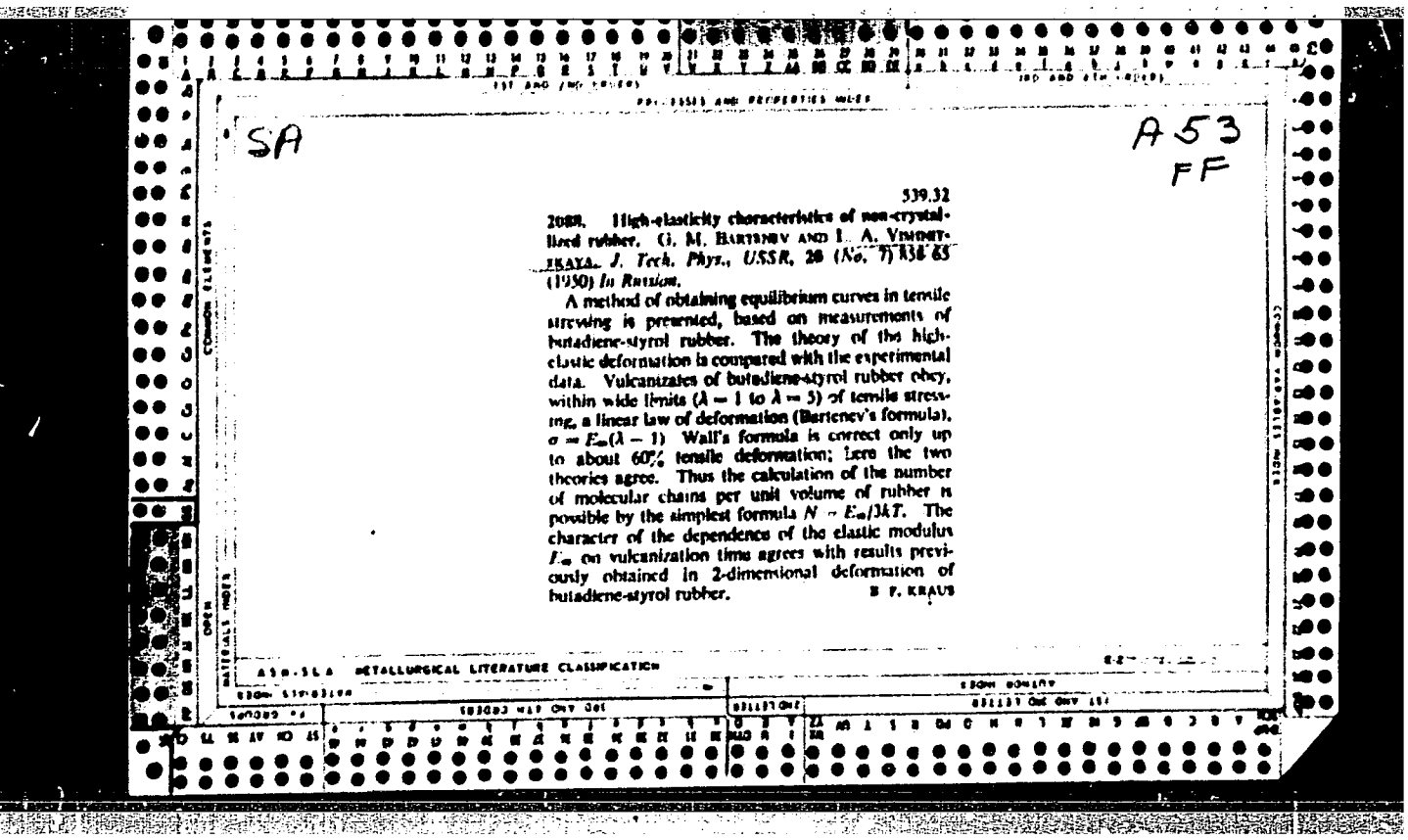
Electric sorption hygrometer. Vod.i san.tekh. no.7:16-20 Je '60. (MIRA 13:7)
(Hygrometry)

P F

Vulg... Mixed Components

2337. Superelastic properties of noncrystallising rubber. G. M. BARTENEV and L. A. VISHNITSKAYA. [illegible] 1958, 20, 838 (R); Chem. Abs. [illegible] 46, 1958. Butadiene-styrene copolymers were examined as to the effect of vulcanisation with sulphur and mercaptobenzthiazole on the elastic properties of the material. Two maxima in the elastic modulus were observed as the vulcanisation period was increased from 7 to 40 min.

3S2M1D21D23 0G3124



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2089. High-elasticity characteristics of non-crystallized rubber. (I. M. Bartenev and I. A. Vinogradskaya. *J. Tech. Phys., USSR*, 20 (No. 7) 836-85 (1950) *In Russian.*

A method of obtaining equilibrium curves in tensile stressing is presented, based on measurements of butadiene-styrol rubber. The theory of the high-elastic deformation is compared with the experimental data. Vulcanizates of butadiene-styrol rubber obey, within wide limits ($\lambda = 1$ to $\lambda = 5$) of tensile stressing, a linear law of deformation (Bartenev's formula), $\sigma = E_\infty(\lambda - 1)$. Wall's formula is correct only up to about 60% tensile deformation; here the two theories agree. Thus the calculation of the number of molecular chains per unit volume of rubber is possible by the simplest formula $N = E_\infty/kT$. The character of the dependence of the elastic modulus E_∞ on vulcanization time agrees with results previously obtained in 2-dimensional deformation of butadiene-styrol rubber. B. P. KRAUS

VISHNEVSKIY, K.P., inzh.

Analysis of the efficiency of water conduit protection devices from hydraulic hammer. Vod. i san. tekh. no.10:18-21 O '65. (MIRA 18:11)

VLEHNEVSKIY, K.P., inzh.

Calculating hydraulic jump with the use of electronic computers.
Trudy Giprovodkhoza no.22:137-140 '63. (MIRA 17:8)

S/196/62/000/010/021/035
E073/E155

AUTHOR: Vishnevskiy, K.P.

TITLE: Investigation of the heat transfer in the layer by the method of the regular regime

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.10, 1962, 3, abstract 10 G16. (Tr. Kuybyshevsk. aviats. in-t, no.12, 1961, 185-192)

TEXT: The conditions of heat transfer during cooling of lump materials in a layer are elucidated, and the relations necessary for practical calculations are derived. Solutions are obtained by applying the theory of the regular regime. For the case of cooling of lump materials in a layer, the ordinary equations of thermal regularity can be applied provided the non-uniformities in the thermo-physical characteristics and the heat-transfer coefficient are averaged with respect to time or temperature for the time interval under consideration. A simplified calculation method has been based on the developed theoretical solution. 4 references.

Card 1/1 [Abstractor's note: Complete translation.]

VISHNEVSKIY, K.P.

Mechanized calculation of circular water-supply systems. Vod. i san. tekh. no. 4:20-24 Ap '61. (MIRA 14:4)
(Water-supply engineering--Tables, calculations, etc.)

8(6) SOV/112-59-4-6535

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 18 (USSR)

AUTHOR: Kudryashev, L. I., and Vishnevskiy, K. P.

TITLE: Theoretical Basis for the Selection of the Determining Temperature and Equivalent Diameter in Computing the Heat-Transfer Factor for Turbulent Motion of a Liquid in a Pipe

PERIODICAL: Sb. nauchn. tr. Kuybyshevsk. industr. in-ta, 1957, Nr 7, pp 41-45

ABSTRACT: A Theoretical basis is given to the suggestion of Academician M. A. Mikheyev, which is: the average liquid temperature is assumed to be the determining temperature, and the equivalent diameter is assumed to be the determining dimension; this diameter is equal to the quadrupled cross-section area divided by the entire (wetted) perimeter of the cross-section, disregarding the fact that only a part of the perimeter plays a role in the heat transfer. To provide proof, a balance of energies passing through an element to the surface that limits the region in question is compiled. To calculate the thickness of the

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Theoretical Basis for the Selection of the Determining Temperature and . . . .

boundary hydrodynamic layer, the balance between the pressure drop in the pipe cross-section and the shearing stress applied at the average-stream boundary is considered. A mathematical expression of this balance, after some transformations, results in an equation of the heat-transfer hydrodynamic theory; this demonstrates the close association of the hydrodynamic theory and the boundary-layer theory, on the one hand, with the problem of selecting the determining temperature and equivalent diameter, on the other.

M.N.N.

SOV/124-57-3-3200

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 80 (USSR)

AUTHORS: Kudryashev, L. I., Vishnevskiy, K. P.

TITLE: On the Calculation of the Coefficient of Convective Heat Exchange During Condensation of Steam on Vibrating Tubes (K raschetu koeffitsiyenta konvektivnogo teploobmena pri kondensatsii para na vibriruyushchikh trubkakh)

PERIODICAL: Sb. nauch. tr. Kuybyshevsk. industr. in-ta, 1955, Nr 5, pp 160-165

ABSTRACT: The author derives a semiempirical criterional formula for the Nusselt number for the heat exchange during the condensation of steam on vibrating horizontal tubes.

G. A. Tirskiy

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124-58-9-9976

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 75 (USSR)

AUTHOR: Vishnevskiy, K.P.

TITLE: On the Resistance and Heat Exchange in a Pulsating Flow (K voprosu o soprotivlenii i teploobmene v pul'siruyushchem potoke)

PERIODICAL: Sb. nauchn. tr. Kuybyshevsk. industr. in-t, 1956, Nr 6, book 1, pp 207-212

ABSTRACT: The author adduces certain concepts on the investigation of the problem of the resistance and heat exchange in a pulsating flow. Transverse pulsations are examined. The author suggests the introduction of the ratio of the pulsating velocity component w'_o to the mean flow-velocity component w_o as a similarity criterion.

1. Pulsating flow--Heat transfer V.S. Avduyevskiy
2. Heat transfer--Theory 3. Pulsating flow--Resistance

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VIS'NEVSKIY, K. P.

"Estimation of heat-exchange during cooling in the layer of grain material."

Report presented at the 1st All-Union Conference on Heat-and Mass-Exchange, Minsk, BSSR, 5-9 June 1961

VISHNEVSKIY, K.P.

Abst Journal: Referat Zhur - Mekhanika, No 3, 1957, 3200

Author: Kudrashev, L. I., Vishnevskiy, K. P.

Institution: None

Title: On the Calculation of the Coefficient of Convective Heat Exchange During Condensation of Steam on Vibrating Tubes

Original Periodical: Sb. nauch. tr. Kuybyshevsk. industr. in-ta, 1955, No 5, 160-165

Abstract: Derivation of a semiempirical criterial equation for the Nusselt number for heat exchange during condensation of steam on vibrating horizontal tubes.

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S/124/60/000/003/013/017
A005/A001

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 3, p. 79, # 3472

AUTHORS: Kudryashev, L. I., Vishnevskiy, K. P.

TITLE: On the Theoretical Substantiation of the Calculation Equation for the Convective Heat-Exchange Coefficient at Turbulent Motion Under Internal-Problem Conditions

PERIODICAL: Sb. nauchn. tr. Kuybyshevsk. industr. in-ta, 1957, No. 7, pp. 33-40

TEXT: The authors attempt to substantiate the known empiric exponential formula of the interconnection between the Nusselt number and the Reynolds- and Prandtl-numbers, using the early "two-layer" Prandtl scheme (laminar sublayer, turbulent layer). Exponential formulae with the same power exponent, equal to the arithmetic mean from the known empirical exponents 1/6 and 1/10 are used for the velocity- and temperature patterns in the turbulent layer. The conventional empirical exponential formula is also used for the resistance coefficient. Using these empirical data and basing also on the impulse- and thermal-balance formulae, the authors set up their theoretical construction. The authors do not

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A005/A001

On the Theoretical Substantiation of the Calculation Equation for the Covective Heat-Exchange Coefficient at Turbulent Motion Under Internal-Problem Conditions

mention the limits of the Prandtl number values, for which they assume their conclusion to be true. At the other hand, it is known that the two-layer scheme is not justified for large Prandtl numbers and must be replaced by a more rigorous scheme, which is the three-layer scheme (laminar layer, intermediate zone, turbulent layer) established by Karman in the thirties.

B

L. G. Loytsyanskiy

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VISHNEVSKIY, K.P.

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USSR.

Condensation of vapor in the presence of inert gases. K. P. Vishnevskii. *Sbornik Nauch. Trudov Kuibyshev. Inst. Inst.* 1953, No. 1, 161–7; *Referat. Zhur., Khim.* 1954 No. 17507. Condensation of water vapor from an air-water mixt. on a steel surface was studied in a tube of 21.3 mm. diam. and 650 mm. long. The steel tube was water-cooled. The vol. content of air in the mixt. (E) was 1.01, 2.35 and 4.77%. The wt. velocity (W) was 1.22–2.95 kg./sq. m. sec. Based on exptl. results the empirical equation $\beta = 72.0E^{0.9}(1/E)^{0.4}W^{0.8}$ was derived, where β is the coeff. of mass transfer in kg./sq.m. hr. atm.

M. Hosch

MEYER ZUR CAPELLEN, Walther; VISHNEVSKIY, K.P. [translator]; NEMIROV, Yu.G. [translator]; VASMANOV, V.V., red.

[Instrumental mathematics for engineers] Instrumental'naia matematika dlia inzhenerov. Moskva, Fizmatgiz 1959. 379 p. (MIRA 14:2)
Translated from the German.
(Mathematical instruments)

VISHNEVSKIY, K. P.

"Calculation of Heat Transfer in a Layer of a Granular Material."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

VISHNEVSKIY, K. P.

"Heat-transfer calculation for the heating and cooling of a bed of fragmented material by a cross flow of gas."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Sci Res Inst of the Cement Industry.